J.P. Morgan Healthcare Conference

Roger J. Pomerantz, M.D.

President, Chief Executive Officer and Chairman

January 11, 2018

SERES THERAPEUTICS™

Leading the Microbiome Revolution

Forward looking statements

Some of the statements in this presentation constitute “forward looking statements” under the Private Securities Litigation Reform Act of 1995, including, but not limited to, statements on the timing and results of our clinical trials, the sufficiency of our financial resources, and dysbiosis as an underlying cause of disease or failed response to therapy. Such statements are subject to important factors, risks and uncertainties (such as those discussed under the caption "Risk Factors" in the Company's Quarterly Report on Form 10-Q filed on November 8, 2017 and its other filings with the SEC) that may cause actual results to differ materially from those expressed or implied by such forward looking statements. Any forward looking statements included herein represent our views as of today only. We may update these statements, but we disclaim any obligation to do so.

Seres investor highlights

Opportunity	Phase 3 stage company developing microbiome-based therapeutics, a highly promising new area of medicine
Platform	Leader in microbiome drug development with differentiated capabilities, leading CMC and demonstrated GMP quality, and supportive clinical data
Pipeline	Broad pipeline in infectious and metabolic diseases, inflammation & immunology, including immuno oncology
Team	Experienced, highly accomplished leadership team

SERES THERAPEUTICS™

The microbiome is essential to human health

Infectious Disease

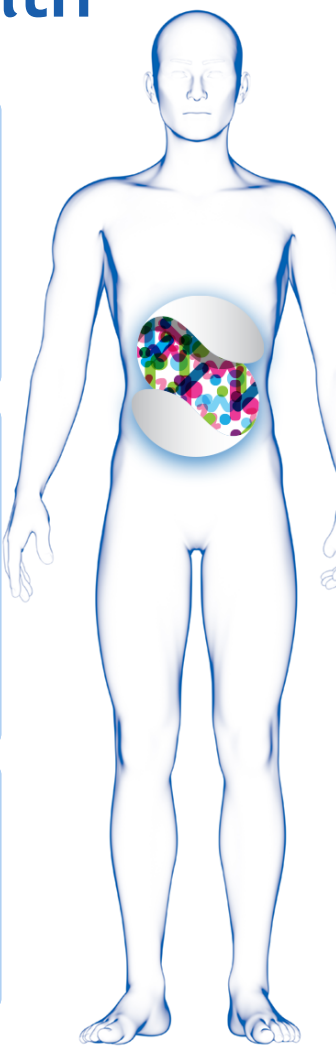
- A diverse microbiome resists colonization by exogenous pathogens
- Exposure to broad spectrum antibiotics, and resulting gut microbiome dysbiosis, increase risk for *C. difficile* infection and colonization / infection by multi-drug resistant organisms

Inflammation and Immunology

- Microbiome known to alter regulatory T cells and Th17 T cell activation
- Role in inflammatory bowel disease (Ulcerative Colitis and Crohn's disease) as well as allergy, rheumatoid arthritis and multiple sclerosis
- The composition of the microbiome has been demonstrated to impact the efficacy and safety of immuno-oncology checkpoint inhibitors

Metabolic Disease

- Effects on glucose utilization, digestion and bile acid metabolism
- Role of microbiome implicated in several metabolic diseases (e.g. diabetes, obesity, liver diseases)



Selected references: Infectious disease / C. difficile: Leffler and Lamont, NEJM, 2015; Ulcerative colitis: Paramsothy et al. Lancet, 2017; Moayyedi et al. Gastroenterology, 2015; Immuno-oncology: Vetizou M et al., Science 2015.; Slvan A. et al., Science 2015.; Dubin et al., Nature, 2016. NASH: Le Roy et al., Hepatology, 2012. Metabolic disease: Perry et al. Nature, 2016, Ridaura VK et al., Science 2013; Primary sclerosing cholangitis: Tabibian JH et al., Hepatology, 2016.

SERES THERAPEUTICS™

Business strategy

Focused R&D

- Prioritize serious diseases where dysbiosis of the gut microbiome has a causal role

***C. difficile* infection**

Inflammatory bowel disease

Immuno-oncology

World class, differentiated, microbiome expertise

- Computational biology
- Basic microbiome research
- Microbiology
- Translational science
- Clinical development
- Advanced GMP manufacturing

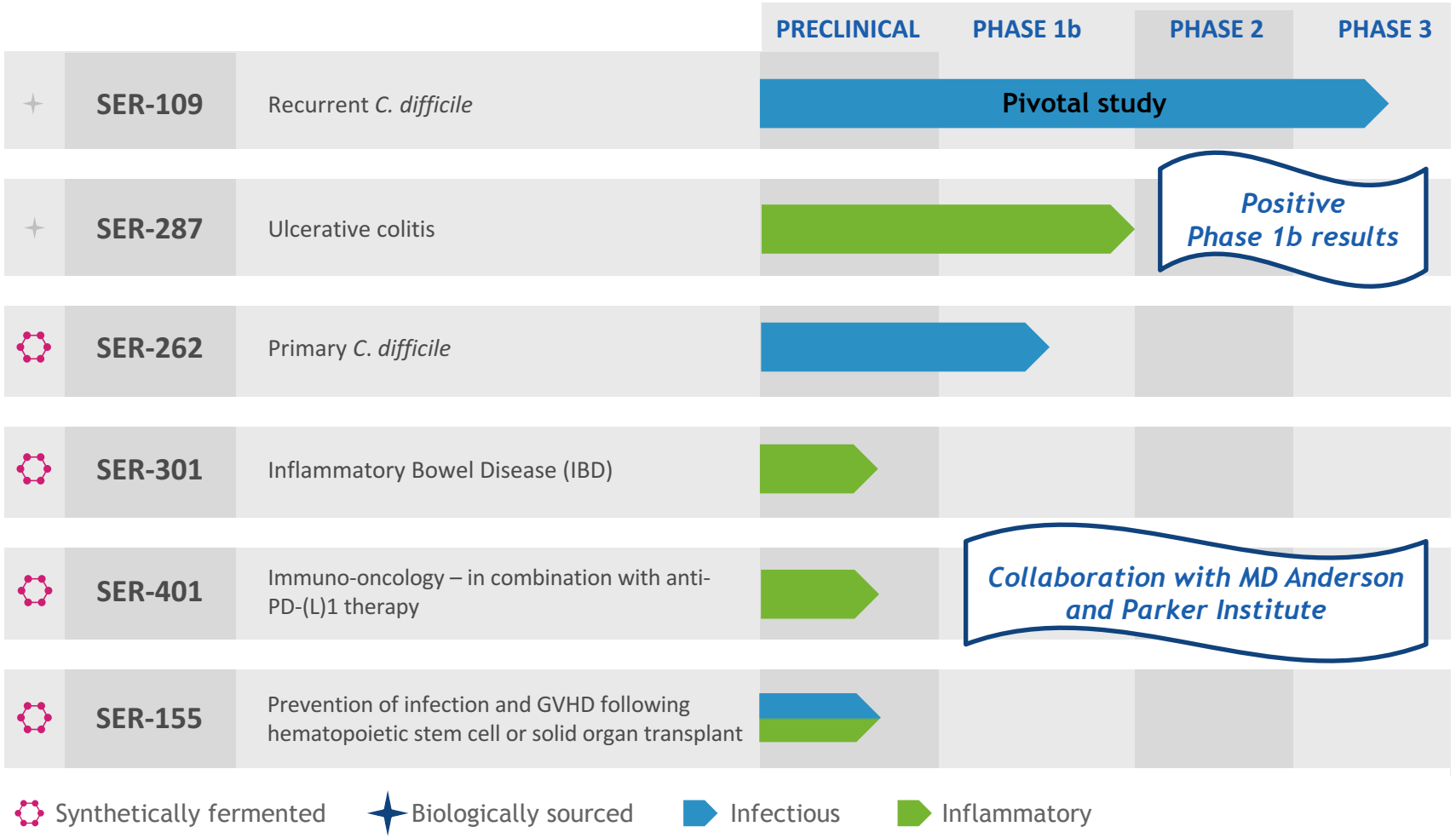
Research in new therapeutic areas

- Collaborate with leading academic centers to advance research in promising therapeutic areas

MASSACHUSETTS GENERAL HOSPITAL
Penn
MAYO CLINIC
Memorial Sloan Kettering Cancer Center
MD Anderson Cancer Center
PARKER INSTITUTE for CANCER IMMUNOTHERAPY
St. Joseph's Healthcare Hamilton

SERES THERAPEUTICS™

Robust microbiome therapeutics pipeline



Research Collaborations

Memorial Sloan Kettering Cancer Center · Penn · Mayo Clinic · Massachusetts General Hospital · St. Joseph's Healthcare Hamilton · MD Anderson Cancer Center · Parker Institute

Clostridium difficile Infection

Overview and R&D Programs

SERES THERAPEUTICS™

Leading the Microbiome Revolution

C. difficile infection overview

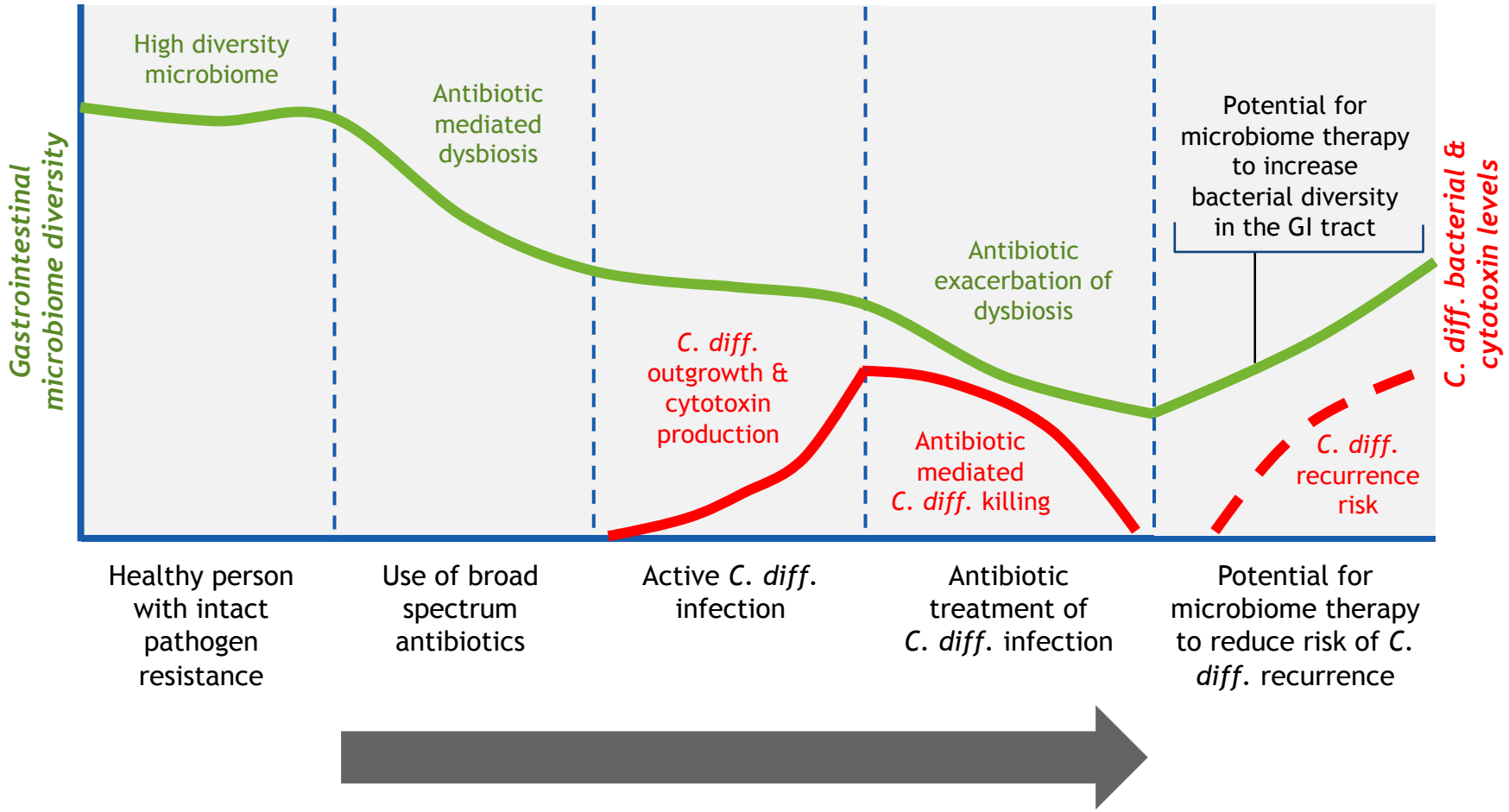
Infectious disease caused by toxin-producing anaerobic, spore-forming bacteria, resulting in diarrhea, abdominal pain, fever, and nausea

Leading cause of hospital-acquired infection in the US

- Approximately 29,000 deaths/year
- ~25% of patients with primary C. diff. recur
- Risk of relapse increases with each recurrence
- Multiply recurrent C. difficile infection incidence increased 188% between 2001-2010

Sources: Leffler and Lamont, New England Journal of Medicine, 2015; Ma et al. Annals of Internal Medicine, 2017.

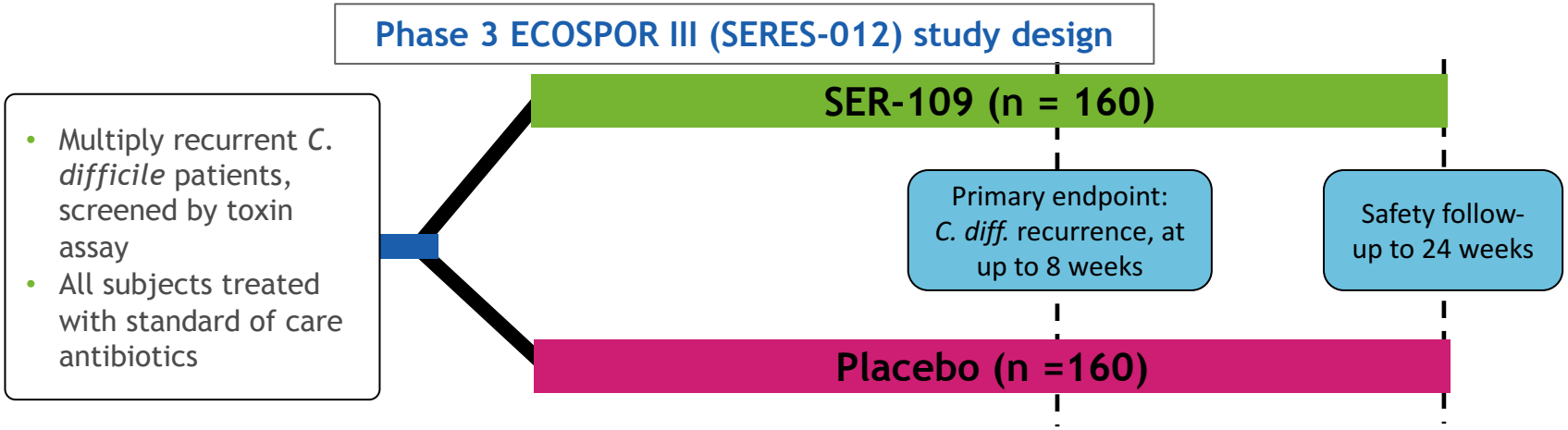
Microbiome therapeutic intervention – Race to Repair
Hypothetical patient course



SERES THERAPEUTICS™

Phase 3 SER-109 ECOSPOR III study ongoing

- FDA Breakthrough and Orphan Drug designation
- Based on FDA feedback, ECOSPOR III designated as a Phase 3 study
- Phase 3 study incorporates key learnings from prior clinical efforts:
  - SER-109 dose is approximately 10-fold higher than dose used in Phase 2 study
  - *C. difficile* toxin assay to be used at study entry and for primary endpoint



SER-262: Synthetic, fermented Ecobiotic® therapeutic candidate for primary *C. difficile* infection

- Oral, microbiome therapeutic candidate comprising twelve strains of fermented, rationally-selected bacterial spores
- Bacterial species selected based on analysis of SER-109 Phase 1b microbiome data, biological and phylogenetic heterogeneity, and preclinical efficacy in *C. difficile* infection mouse model
- Data support a mechanism of action in which SER-262 strains compete for *C. difficile* preferred carbon sources

SER-262 strains utilize multiple carbon sources

Strain Designation	Sugars, sugar alcohols, glucosides																Carboxylic acids		
	fru	glu	man	rha	rib	xyl	cel	scr	tre	mel	pec	mtl	sor	NAG	glm	sal	for	suc	pyr
C. difficile																			
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

***In vitro* fermentation**

SER-262 Phase 1b dosing study in patients with primary C. difficile infection

60+ patients with primary *C. difficile* infection

- Cohort A: Tx with 10^4 spores (n=10); placebo (n=2); single dose
- Cohort B: Tx with 10^5 spores (n=10); placebo (n=2); single dose
- Cohort C: Tx with 10^6 spores (n=10); placebo (n=2); single dose
- Cohort D: Tx with 10^7 spores (n=10); placebo (n=2); single dose
- Cohort E: Tx with 10^8 spores (n=10); placebo (n=2); single dose
- Multi Dose Cohorts: Tx spores (n=10); placebo (n=2); Dosing provided over three days

Primary Objective

Safety and tolerability at 24 weeks

Relative risk of *C. difficile* recurrence compared to placebo at up to 8 weeks

Secondary Objectives

Microbiome engraftment

Time to *C. difficile* recurrence

Relative risk of recurrence at up to 4, 12, and 24 weeks after treatment

Top line results expected in early 2018

SERES THERAPEUTICS™

SER-287 and Ulcerative Colitis

SERES THERAPEUTICS™

Leading the Microbiome Revolution

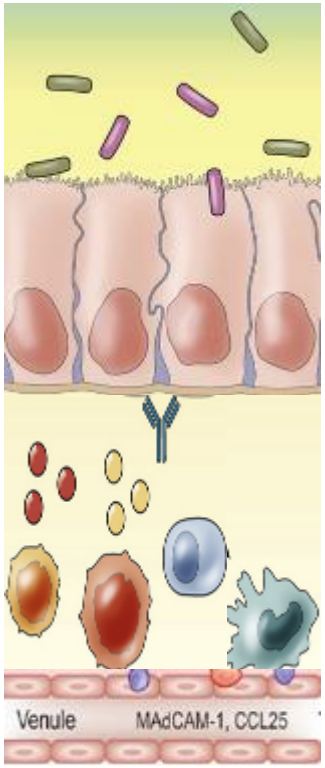
Inflammatory Bowel Disease (IBD) opportunity for new mechanistic approaches

Significant need for improved therapies

- Large US population: ~700K ulcerative colitis, ~700K Crohn's
- Fewer than ~1/3 of patients achieve remission with current therapies
- Many therapies are immunosuppressive, limiting widespread use

SERES THERAPEUTICS™

Modulation of the microbiome is an attractive therapeutic target for Ulcerative Colitis



- May address drivers of inflammation, barrier integrity, innate immune activation, and adaptive immune education and cell trafficking
- Effector molecules may include short chain fatty acids, secondary bile acids, tryptophan metabolites, and TLR ligands
- **Potentially synergistic effect with other UC products**

Microbiota transplantation provides clinical proof of concept

THE LANCET

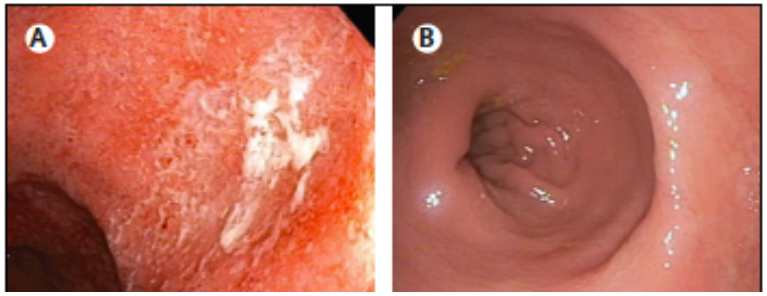
Multidonor intensive faecal microbiota transplantation for active ulcerative colitis: a randomised placebo-controlled trial

Sudarshan Paramsothy, Michael A Kamm, Nadeem O Kaakoush, Alissa J Walsh, Johan van den Bogaerde, Douglas Samuel, Rupert W L Leong, Susan Connor, Watson Ng, Ramesh Paramsothy, Wei Xuan, Enmoore Lin, Hazel M Mitchell, Thomas J Borody

	Faecal microbiota transplantation (n=41)	Placebo (n=40)	Risk ratio (95% CI)	p value
Primary outcome				
Steroid-free clinical remission and endoscopic remission or response*	11 (27%)	3 (8%)	3·6 (1·1–11·9)	0·021

Subject A, Baseline

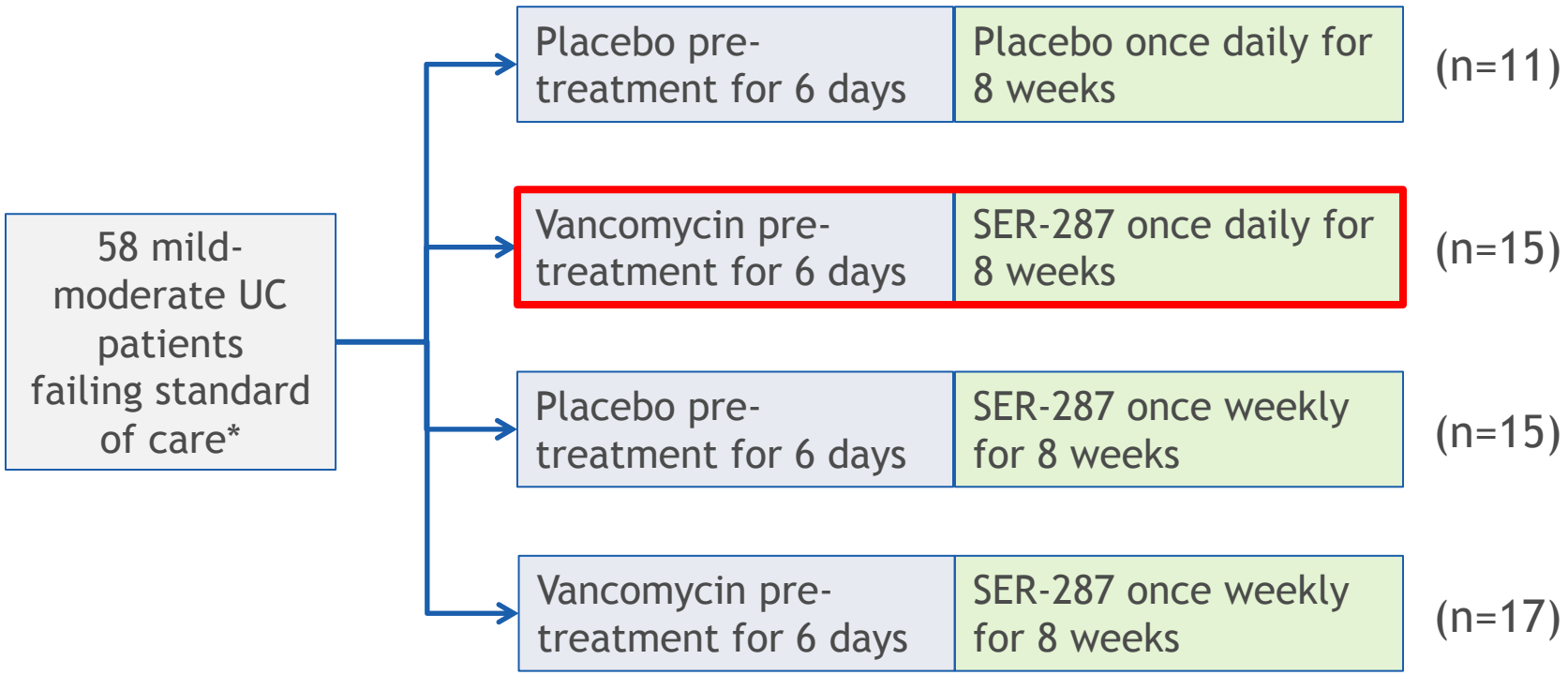
Subject A, 8-wk post FMT



Selected references: Paramsothy *et al*. Lancet, 2017; Moayyedi *et al*. Gastroenterology, 2015; Review article: Costello et al. Alimentary Pharmacology & Therapeutics, 2017.

SERES THERAPEUTICS™

SER-287 Phase 1b Ulcerative Colitis study



* Study designed to enroll 55 patients, with 15 in SER-287 treatment arms and 10 in the placebo / placebo arm

SERES THERAPEUTICS™

SER-287 Phase 1b study endpoints

Primary Objectives

- Safety and tolerability
- Change in composition of intestinal microbiome at 8 weeks ***New data***

Secondary Objectives

- Remission, endoscopic improvement, and response through measure of the total modified Mayo Score
- Change in serum and fecal biomarkers
- Pathologic changes in mucosal biopsies (i.e., histology) ***New data***

SERES THERAPEUTICS™

Clinical efficacy endpoints

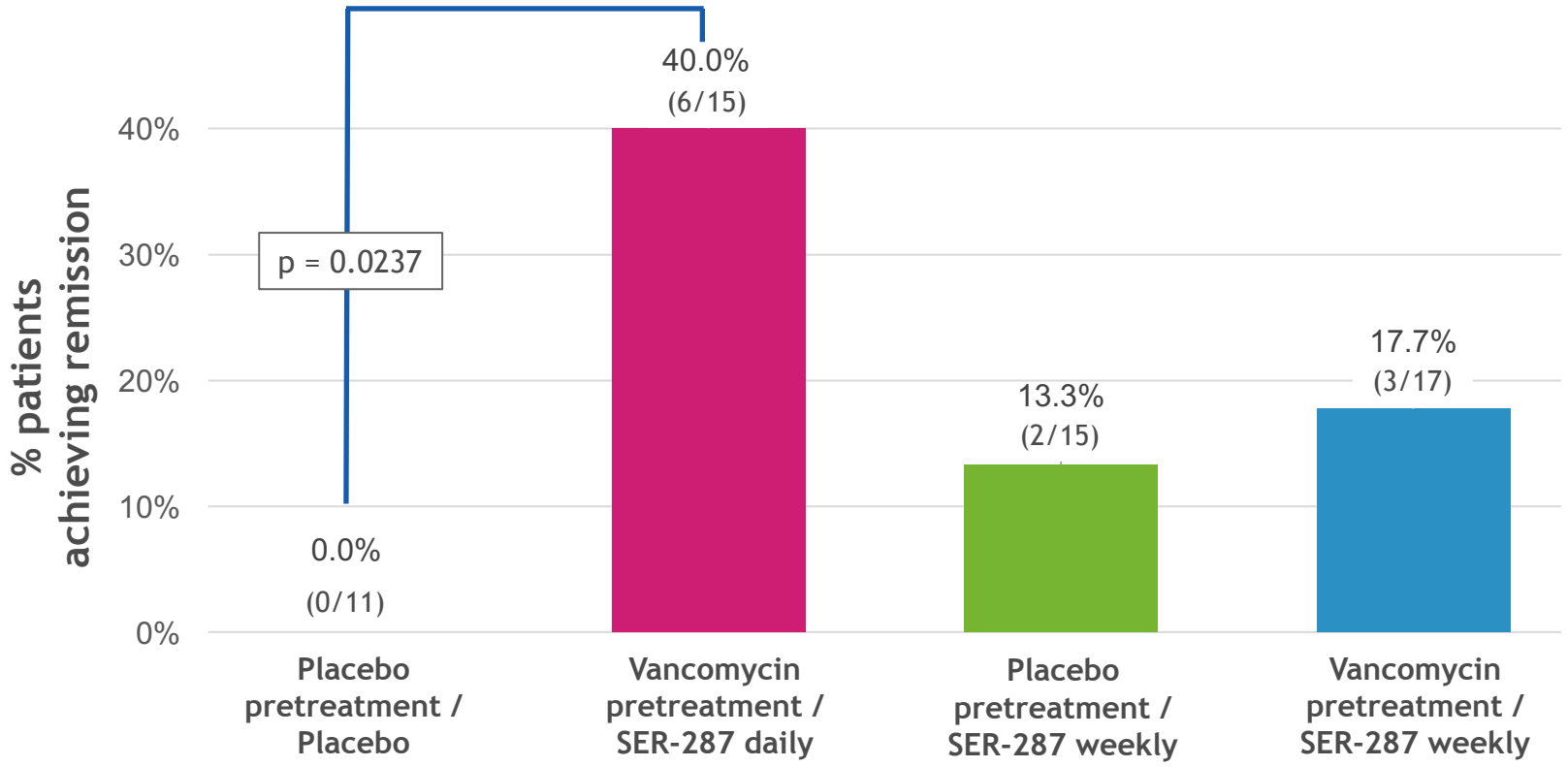
Modified Mayo score components

1. Mucosal Appearance by endoscopy ***(Most objective)***
2. Stool Frequency
3. Rectal Bleeding
4. Physician Rating of Disease Activity

Endpoint	Protocol Definition
Remission	Total Modified Mayo Score <=2 and an endoscopic subscore of 0 or 1
Endoscopic Improvement	Decrease in endoscopic subscore of >=1
Response	Decrease of >=3 points in Total Modified Mayo Score from baseline, along with either a decrease of >=1 point in rectal bleeding subscore or absolute rectal bleeding subscore of 0 or 1

SERES THERAPEUTICS™

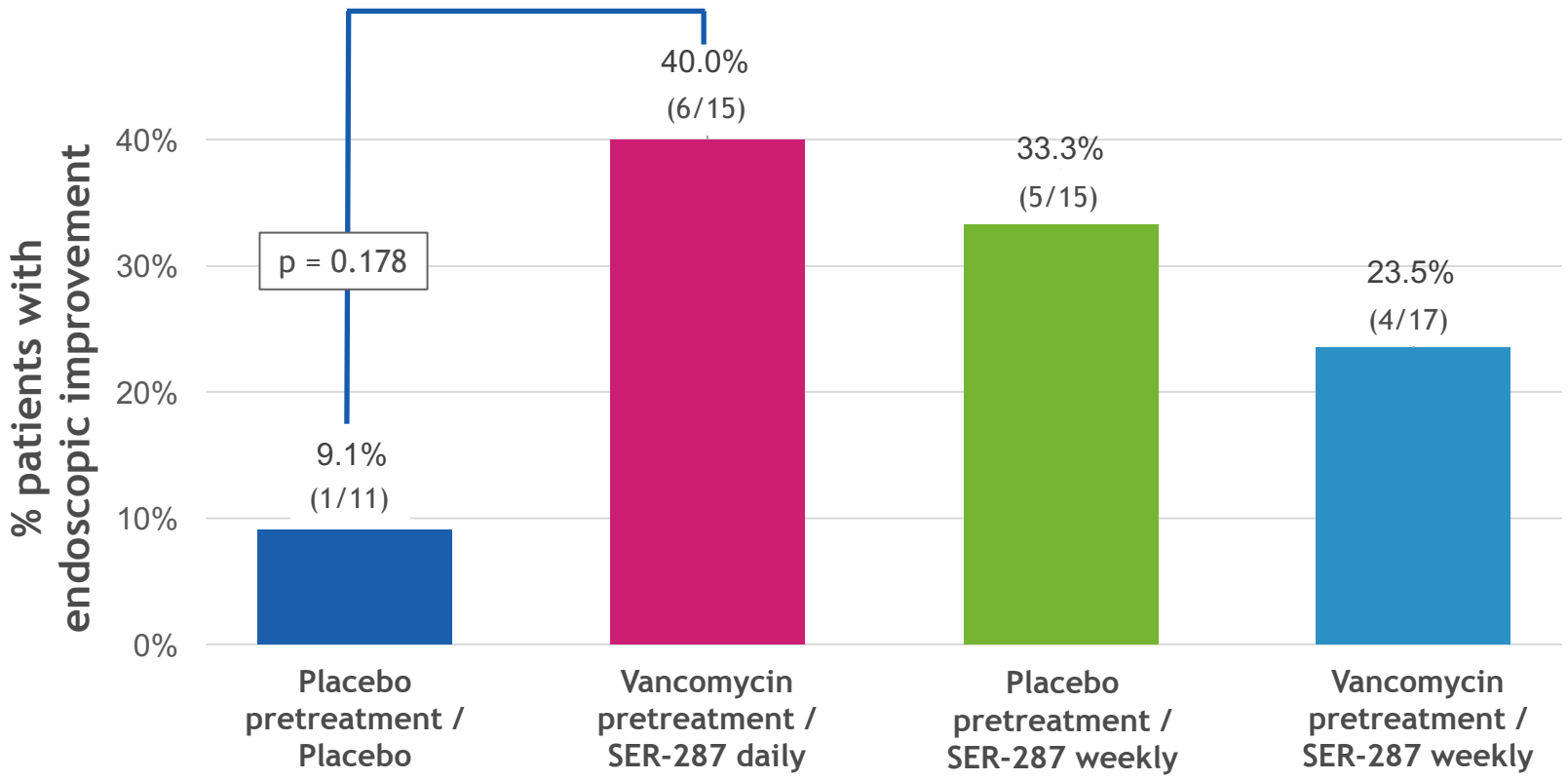
Significant and dose dependent impact on remission



Endoscopy readings were centrally read by blinded readers.
Data based on an intent to treat missing data counted as a failure analyses. Under observed data analysis, 1/10 (10%) and 6/15 (40%) patients in the placebo pretreatment / placebo and vancomycin pretreatment / SER-287 daily treatment arms, respectively, achieved remission and endoscopic improvement (p=0.1794). The observed analysis includes a patient in the placebo study arm who experienced a disease flare and was treated with corticosteroids (a protocol violation) prior to the end of treatment endoscopy

SERES THERAPEUTICS™

Dose dependent impact on endoscopic improvement

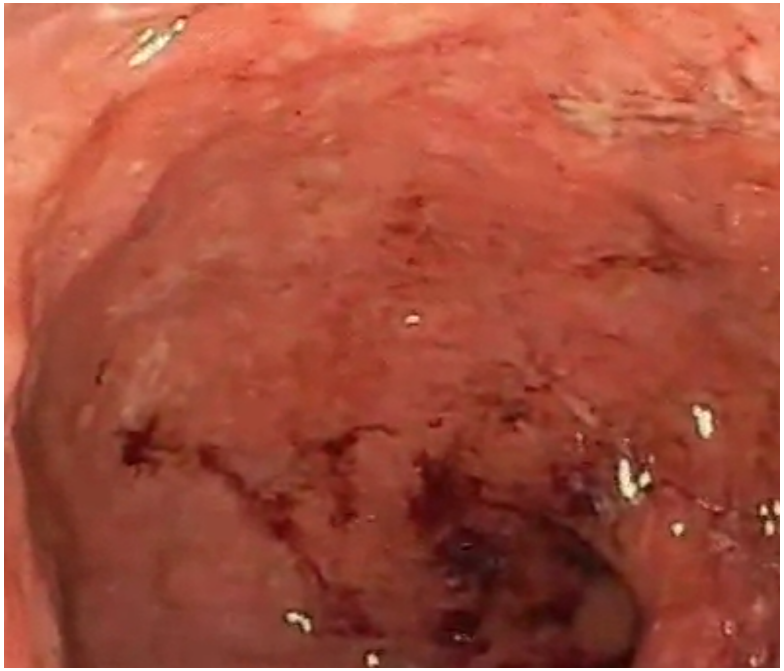


Endoscopy readings were centrally read by blinded readers.
Data based on an intent to treat missing data counted as a failure analyses. Under observed case analysis, 1/10 (10%) and 6/15 (40%) patients in the placebo pretreatment / placebo and vancomycin pretreatment / SER-287 daily treatment arms, respectively, achieved endoscopic improvement (p=0.1794). The observed analysis includes a patient in the placebo study arm who experienced a disease flare and was treated with corticosteroids (a protocol violation) prior to the end of treatment endoscopy

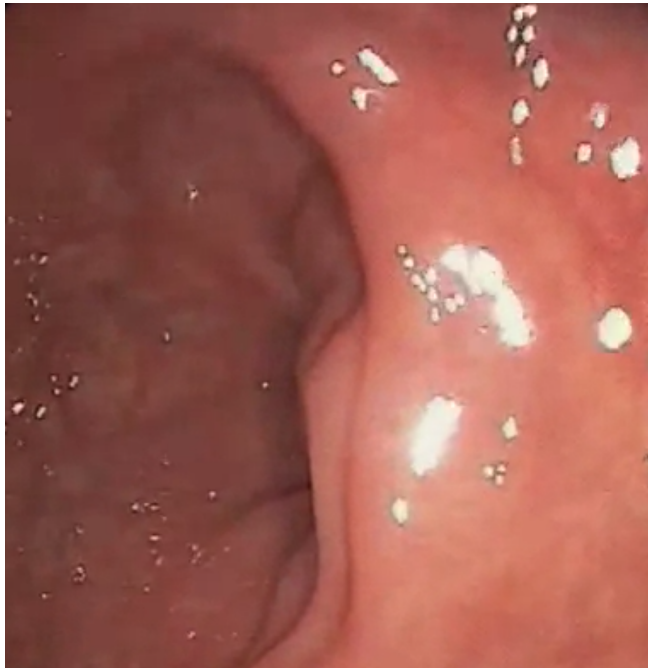
SERES THERAPEUTICS™

Illustrative endoscopy improvement findings from patient in SER-287 daily treatment arm

Pre-treatment endoscopy showing the sigmoid colon with spontaneous bleeding and ulceration

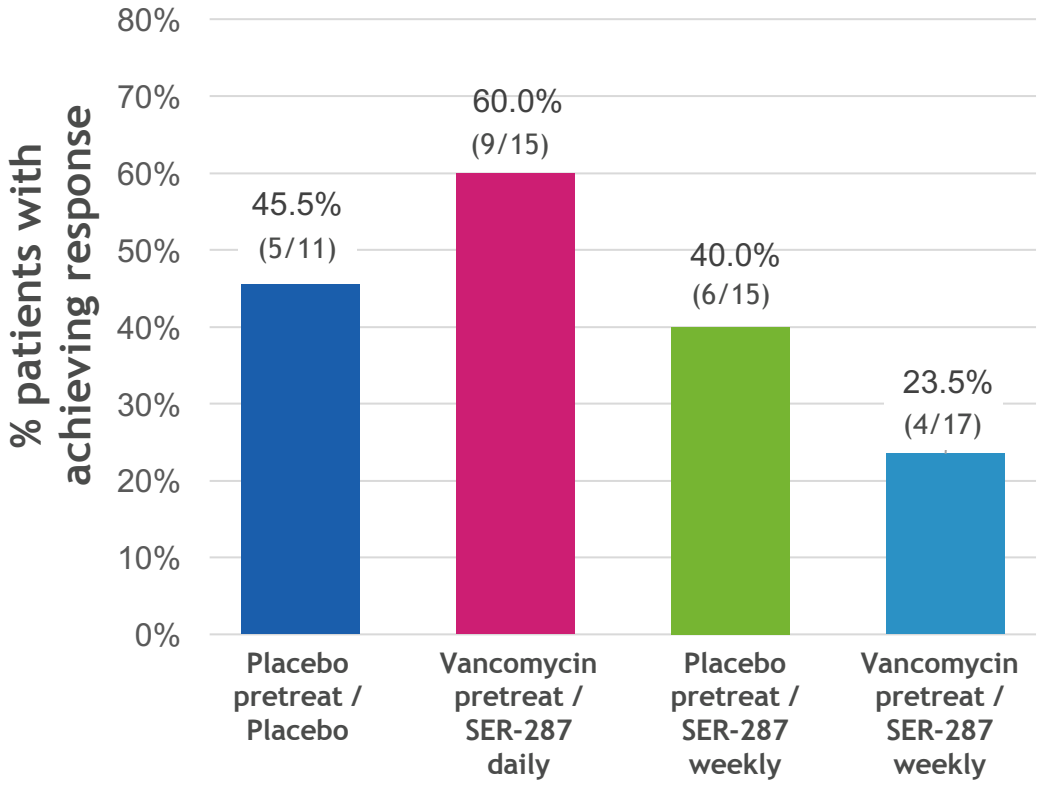


Post-treatment day 64 endoscopy



SERES THERAPEUTICS™

Response rate is less reliable endpoint; Not recommend by FDA as a primary endpoint for UC



High placebo response rate reported in other UC clinical studies using drugs with diverse mechanisms[1]

Ulcerative Colitis: Clinical Trial Endpoints

Guidance for Industry[2]

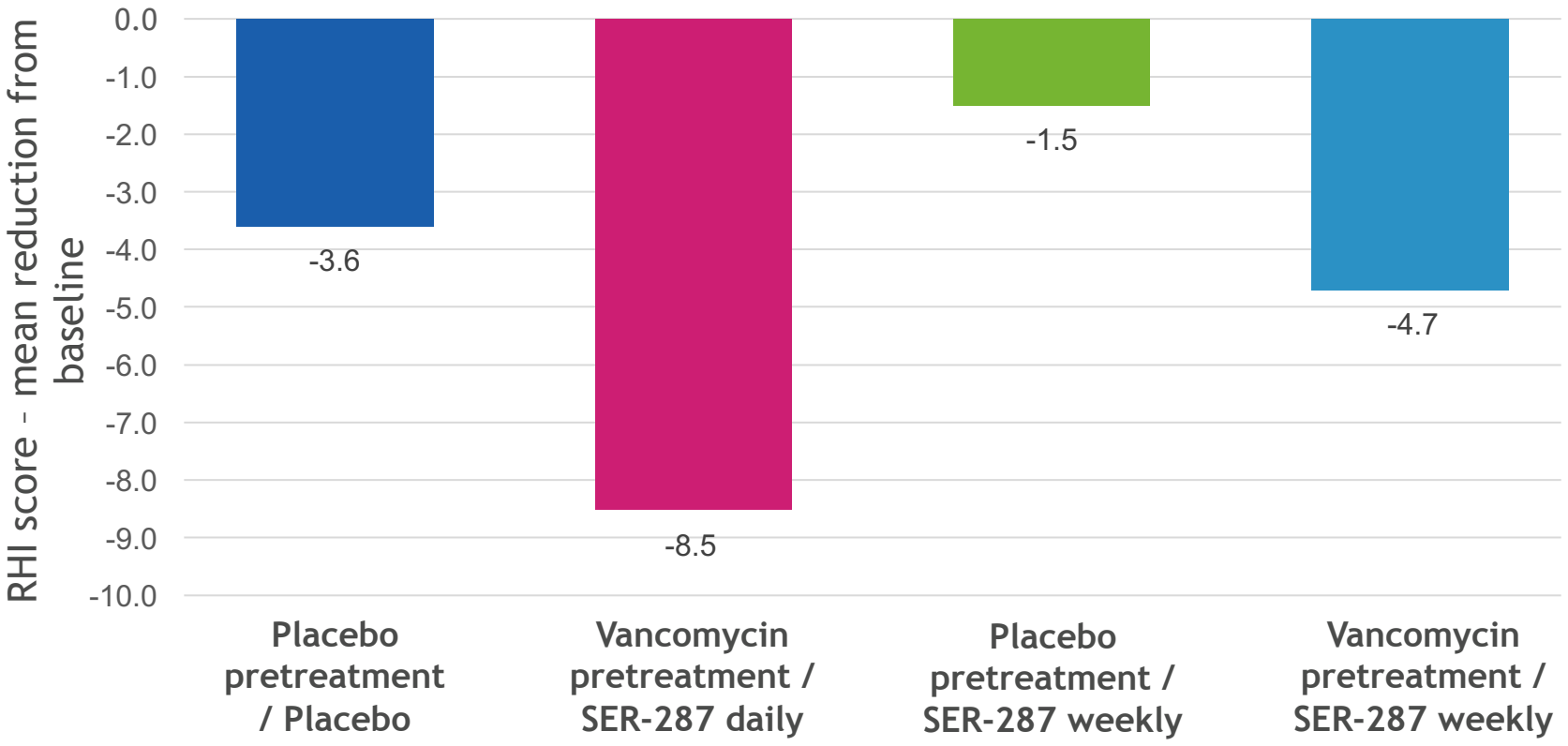
"We currently recommend a primary endpoint of clinical remission (responder definition based on Stool Frequency, Rectal Bleeding, and Endoscopy scores)."

1. Jairath V. et al., *Journal of Crohn's and Colitis*, 2016
2. August 2016 FDA draft guidance

Data based on an intent to treat missing data counted as a failure analyses. Under observed case analysis, 6/10 (60%) and 6/10 (60%) patients in the placebo pretreatment/placebo and vancomycin pretreatment/SER-287 daily treatment arms, respectively, achieved response (p=0.99). The observed analysis includes a patient in the placebo study arm who experienced a disease flare and was treated with corticosteroids (a protocol violation) prior to the end of treatment endoscopy

SERES THERAPEUTICS™

Histological healing RHI score change 8 weeks post SER-287 administration



Note: Intent to treat population, missing data equal failure
Subjects with normal histology at Baseline were excluded. Seres also evaluated potential biomarkers serum CRP and fecal calprotectin and observed no statistically significant impact.

SERES THERAPEUTICS™

Favorable SER-287 Phase 1b safety profile

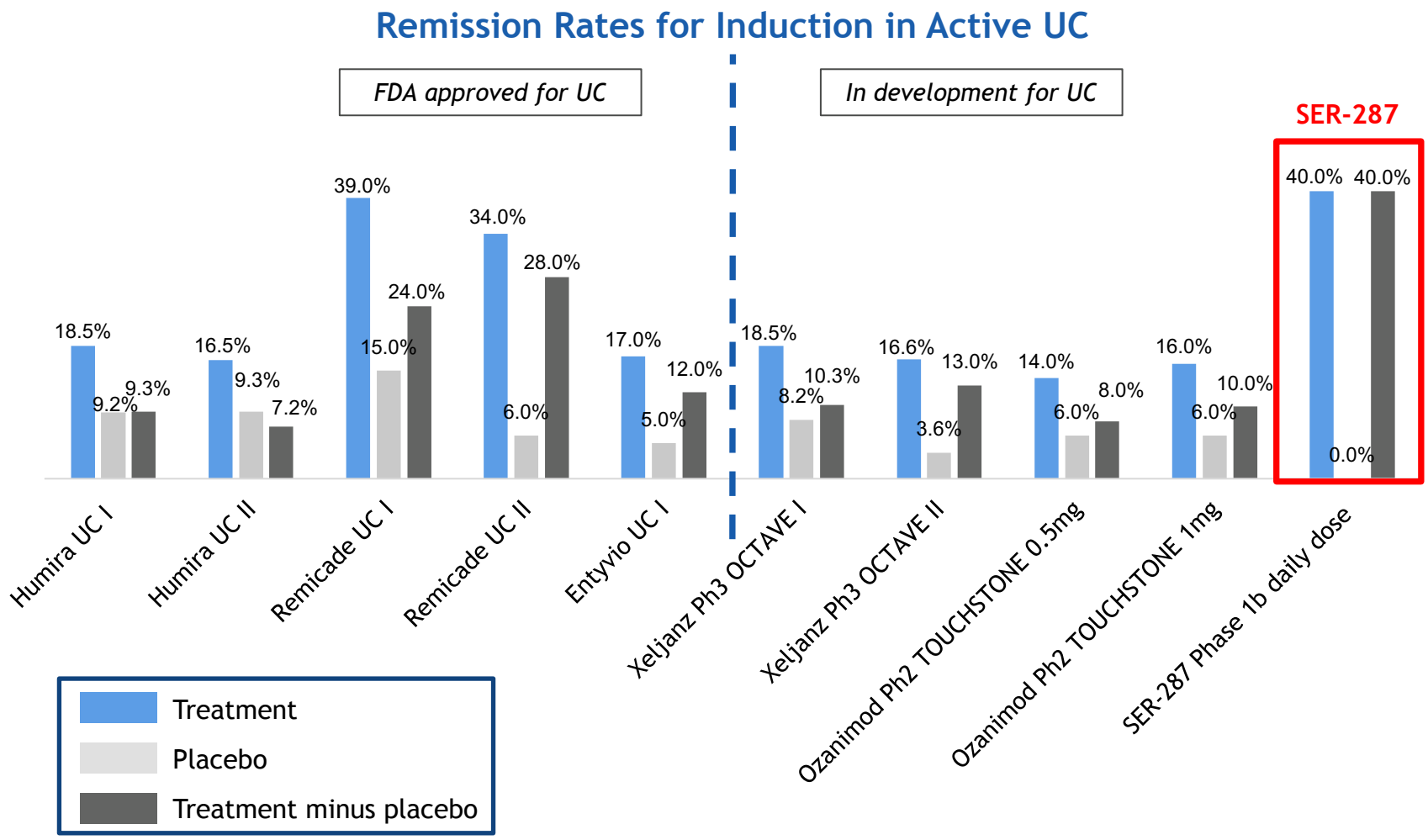
- SER-287 daily arm demonstrated a similar safety profile to placebo
- No serious drug-related adverse events
- No subject discontinuations in the SER-287 daily treatment arm
- Reduced gastrointestinal adverse events provide an independent assessment of efficacy with decreased disease activity
  - SER-287 daily arm GI AEs: 2/15 (13.3%) vs. placebo arm: 5/11 (45.5%)

Analyses of post SER-287 treatment impact on disease activity

SER-287 Phase 1b patients were followed for up to 26 weeks post treatment:

- Of the 11 patients treated with SER-287 who achieved clinical remission, no patients experienced a disease flare in the 26 weeks following the end of treatment (0/11)

Favorable SER-287 efficacy relative to selected approved and development stage UC drugs



Adapted from Leerink Nov. 27 2017 report: Future of IBD: Category should double by 2023 despite GED-0301 disappointment; Note that study-to-study differences limit the ability to directly compare results.

SERES THERAPEUTICS™

SER-287 Phase 1b study endpoints

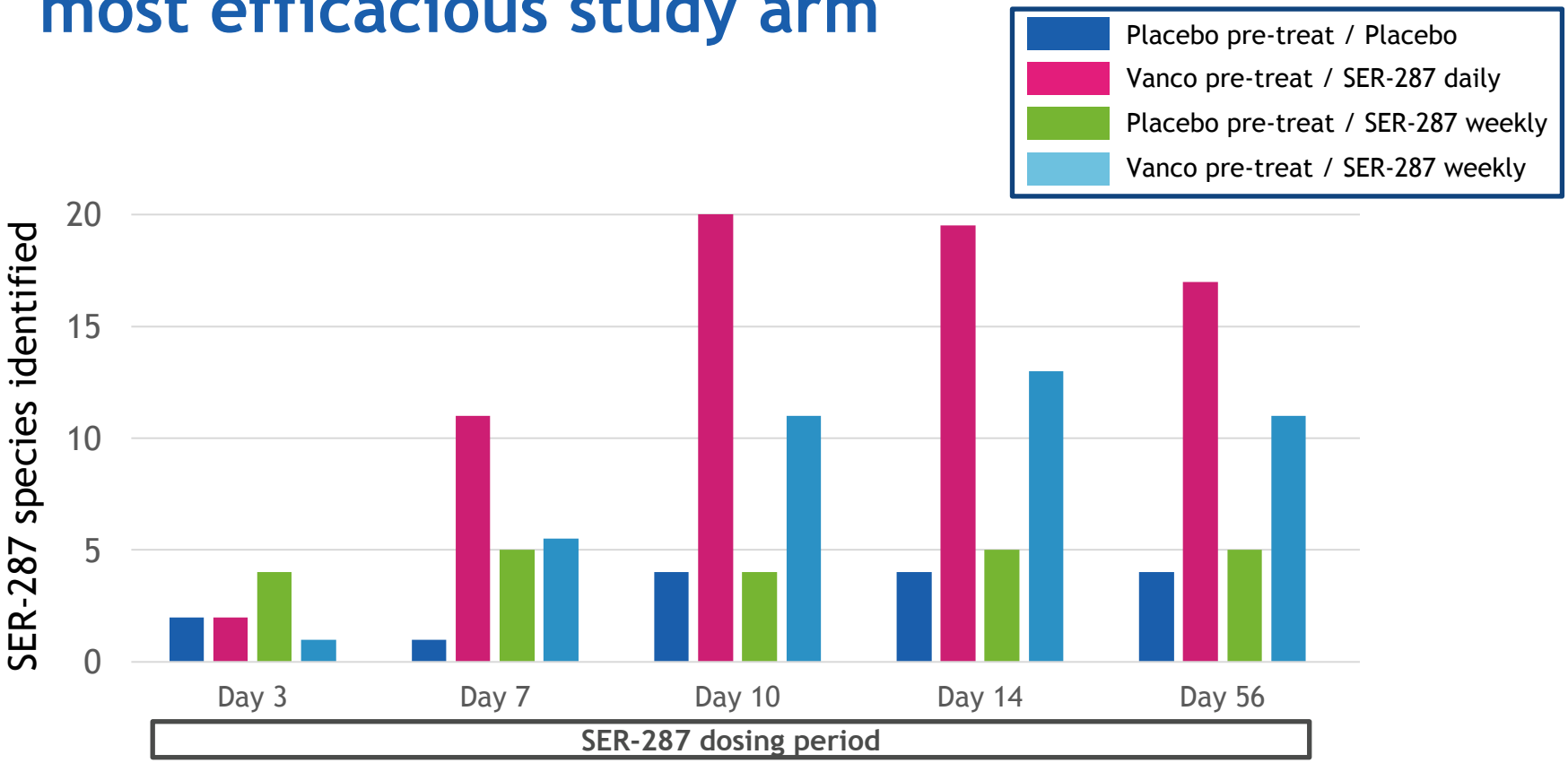
Primary Objectives

- Safety and tolerability
- Change in composition of intestinal microbiome at 8 weeks ***New data***

Secondary Objectives

- Remission, endoscopic improvement, and response through measure of the total modified Mayo Score
- Change in serum and fecal biomarkers
- Pathologic changes in mucosal biopsies (i.e., histology) ***New data***

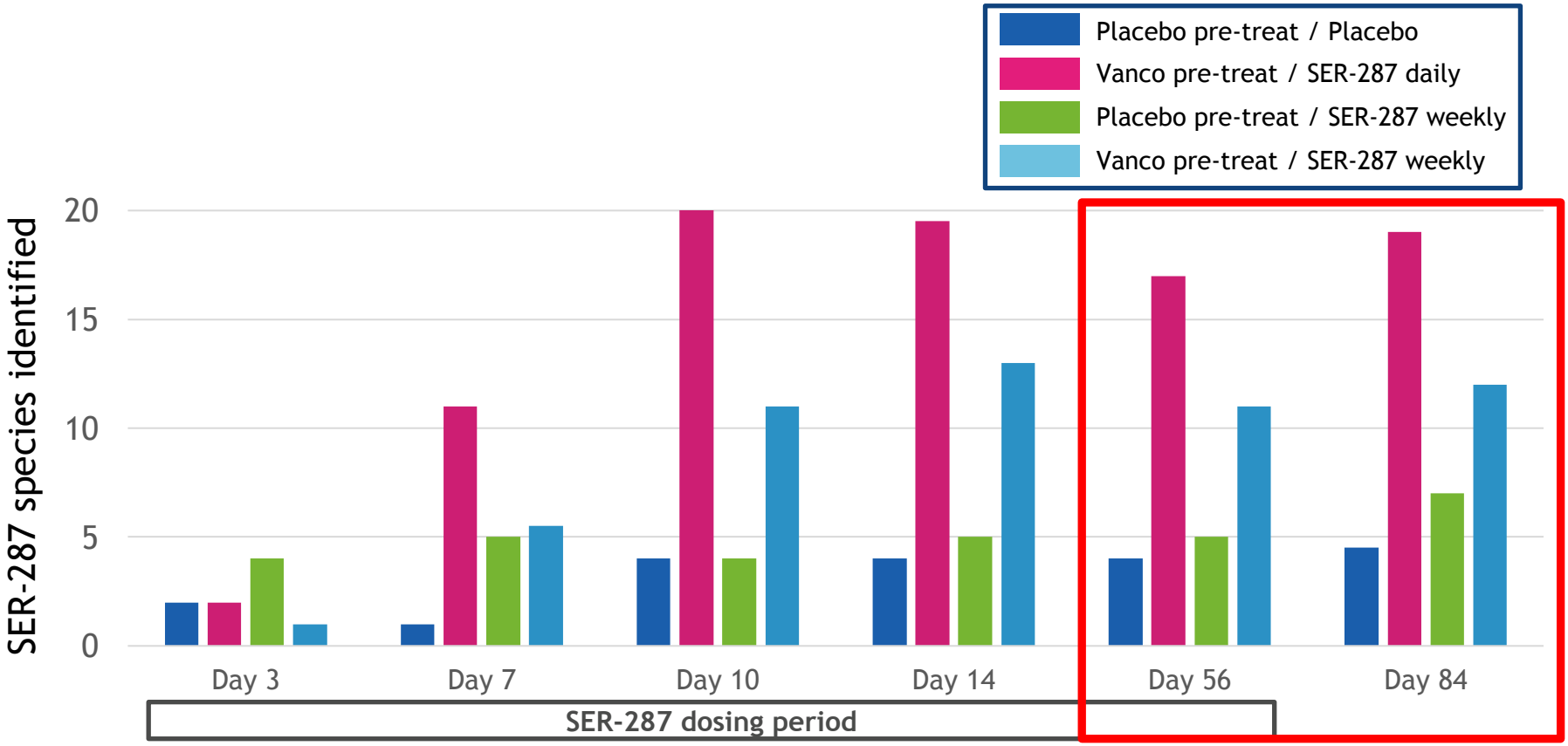
Robust SER-287 species engraftment; highest in most efficacious study arm



- Statistically significant engraftment in vanco pre-treat / SER-287 daily arm, versus placebo pre-treat / placebo arm, beginning at day 7 and maintained throughout the dosing period
- Statistically significant and dose-dependent engraftment in study arms with vanco pre-treatment / SER-287 versus placebo pre-treat arms
- Data supportive of vancomycin opening ecological niches for SER-287 engraftment

SERES THERAPEUTICS™

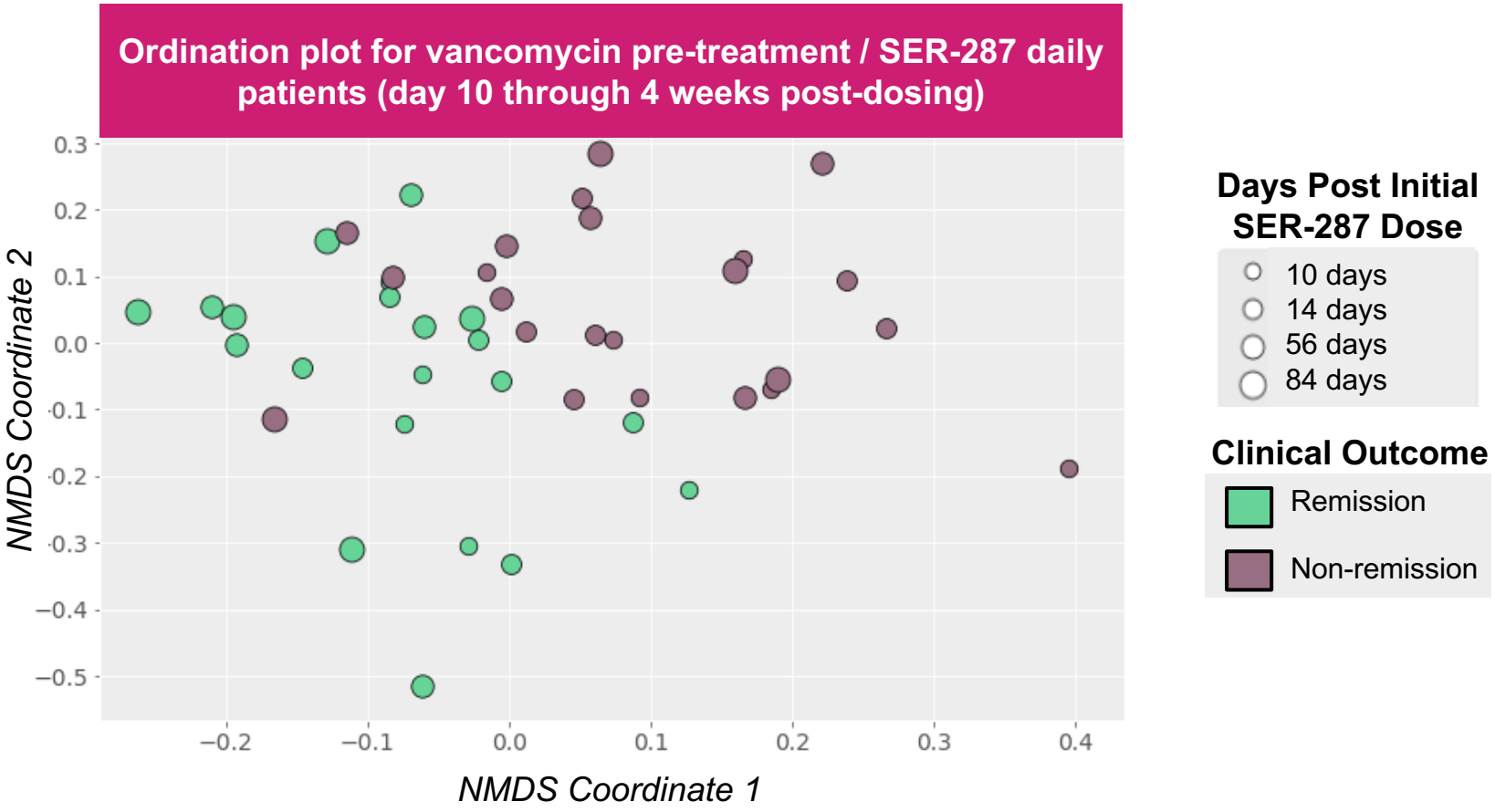
Durable SER-287 engraftment following dosing



- Statistically significant engraftment maintained through at least 4 weeks following SER-287 dosing

SERES THERAPEUTICS™

Microbiome composition is distinct in patients achieving remission

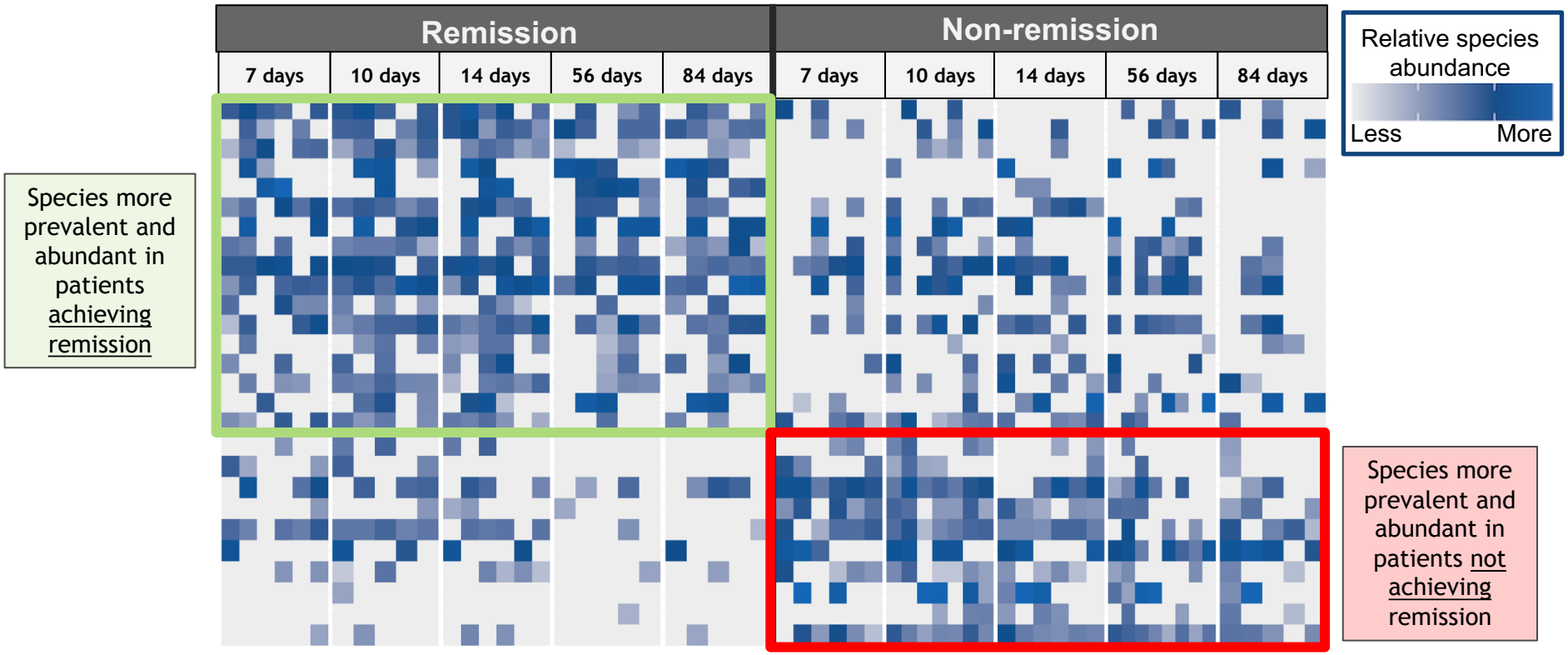


Non-metric multidimensional scaling plot shows ecological distance between microbiome compositions of 15 subjects (6 remission, 9 non-remission) at different timepoints; microbiome samples not available for all timepoints of each subject. Ecological distance is calculated using the Binary Jaccard metric which computes the similarity between any two samples based on the presence and absence of species.

SERES THERAPEUTICS™

Specific bacterial species linked with remission

- Identified 27 species ecology statistically significantly correlated with remission
- Species include both SER-287 bacteria and others augmented by treatment



Relative abundance heatmap depiction of bacterial species prevalence from vanco pre-treat / SER-287 daily study arm patients. Each row represents a single bacterial species and each column represents a single patient. Shading of each square illustrates the relative abundance of each species.

SERES THERAPEUTICS™

Advancing SER-287 clinical development

- Compelling Phase 1b results:
  - Beneficial impact on remission and endoscopic improvement
  - Favorable safety and tolerability profile
  - Microbiome data provide mechanistic support for clinical results and demonstrate species-level bacterial signatures associated with efficacy
- Obtained FDA Orphan Designation for Pediatric Ulcerative Colitis
- Rapidly advancing SER-287 clinical development:
  - Obtain FDA guidance
  - Expect to start next Ulcerative Colitis clinical study - mid-2018
  - Evaluate other opportunities (e.g. Crohn's disease, UC combination therapy)

SER-287 Phase 1b study results to be presented at 13th European Crohn's and Colitis Organisation congress (Feb 14-17, 2018)

SER-301: Synthetic fermented Ecobiotic® therapeutic candidate for inflammatory bowel disease

- Oral, mechanistically designed follow-on to SER-287
- Selection of SER-301 bacterial composition based on:
  - SER-287 study data (clinical and microbiome analysis)
  - Preclinical activity of microbiome compositions
- Rationally designed composition has shown activity in mouse model

SER-401 and Immuno-oncology

SERES
THERAPEUTICS™

Leading the Microbiome Revolution

Gut microbiome composition impacts efficacy of checkpoint inhibitors in oncology patients

Science

Anticancer immunotherapy by CTLA-4 blockade relies on the gut microbiota

Marie Vétizou[1,2,3], Jonathan M. Pitt[1,2,3], Romain Daillère[1,2,3], Patricia Lepage[4], Nadine Waldschmit...
+ See all authors and affiliations

Science 27 Nov 2015:
Vol. 350, Issue 6264, pp. 1079-1084
DOI: 10.1126/science.aad1329

Science

Commensal *Bifidobacterium* promotes antitumor immunity and facilitates anti–PD-L1 efficacy

Ayelet Sivan[1,*], Leticia Corrales[1,*], Nathaniel Hubert[2], Jason B. Williams[1], Keston Aquino-Michaels[3], Zachary...
+ See all authors and affiliations

Science 27 Nov 2015:
Vol. 350, Issue 6264, pp. 1084-1089

Science

Gut microbiome influences efficacy of PD-1–based immunotherapy against epithelial tumors

Bertrand Routy[1,2,3], Emmanuelle Le Chatelier[4], Lisa Derosa[1,2,3], Connie P. M. Duong[1,2,5], Maryam Tidjani Alou[1,2,3], Romain D...
+ See all authors and affiliations

Science 02 Nov 2017:
eaan3706
DOI: 10.1126/science.aan3706

Science

Gut microbiome modulates response to anti–PD-1 immunotherapy in melanoma patients

V. Gopalakrishnan[1,2,*], C. N. Spencer[2,3,*], L. Nezi[3,*], A. Reuben[1], M. C. Andrews[1], T. V. Karpinets[3], P. A. Prieto[1,†], D. Vicente[1]...
+ See all authors and affiliations

Science 02 Nov 2017:
eaan4236
DOI: 10.1126/science.aan4236

November 2017 Collaboration

MD Anderson Cancer Center

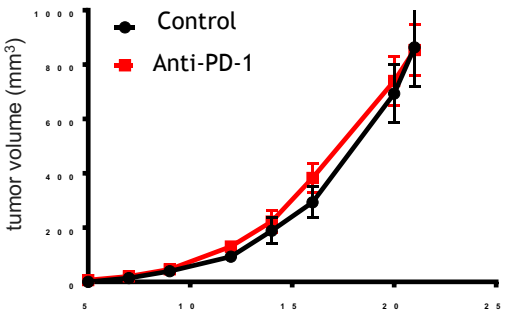
SERES THERAPEUTICS™
Leading the Microbiome Revolution

PARKER INSTITUTE for CANCER IMMUNOTHERAPY

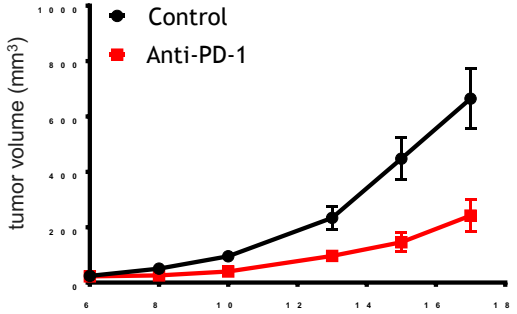
Modulation of the microbiome restores anti tumor efficacy and immune infiltration to anti-PD-1 therapy

Anti-tumor efficacy following anti-PD-1 administration into colonized mice

Tumor Growth Curves - Germ free

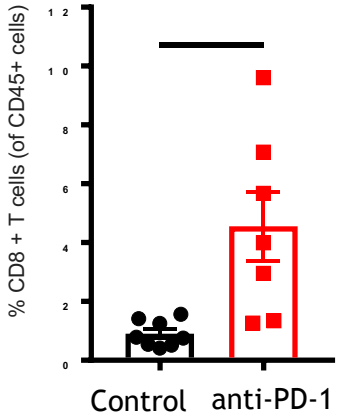


Tumor Growth Curves - Colonized

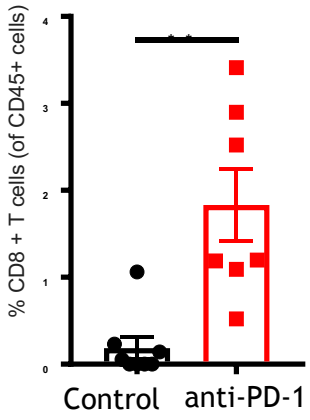


Immune cell infiltration into tumor following anti-PD-1 administration

CD8+ T cells



Dendritic cells



SERES THERAPEUTICS™

Collaboration to advance microbiome therapeutic into immuno-oncology

- Planned clinical study to evaluate impact of checkpoint inhibitors plus adjunctive microbiome therapeutics on clinical outcomes in patients with advanced metastatic melanoma
- Planned start study in 2018
- Seres option to license foundational intellectual property from MD Anderson related to the use of bacteria in combination with checkpoint inhibitors

Broad IP portfolio and regulatory exclusivity

8 ISSUED US PATENTS + LICENSED IP*

- Demonstrates rationally designed ecologies of spores and microbes are patentable
- Composition of matter and method claims, including option to license foundational IP from MD Anderson related to the use of bacteria in combination with checkpoint inhibitors
- Claims related to SER-109/ *C. difficile* & colitis lead candidates through **2033**

SERES PATENT PORTFOLIO

14 **Families of Applications**

- **9** **Nationalized**
- **2** **Pending PCT**
- **3** **Pending Provisionals**

REGULATORY EXCLUSIVITY

12 years for new biological composition

10 years for new drug

* Includes additional IP rights including 1) a worldwide exclusive license to Memorial Sloan Kettering Cancer Center patent applications related to the use of bacterial compositions for treating HSCT patients and related areas, 2) exclusive option to license intellectual property rights from MD Anderson related to the use of bacteria in combination with checkpoint inhibitors.

SERES THERAPEUTICS™

Well positioned for success

SER-109: Multiply recurrent *C. difficile* infection – Phase 3 ongoing

SER-287: Ulcerative colitis – Initiate new clinical study (mid-2018)

SER-262: Primary *C. difficile* infection - Phase 1b read-out (early 2018)

Immuno-oncology clinical study start (2018)

Advancing pipeline programs in infectious diseases, inflammatory and immune diseases (including immuno-oncology), metabolic and liver diseases

Resources to operate through 2018

Balance Sheet	As of Sept. 30, 2017
Cash, cash equivalents and investments	$171.3 M

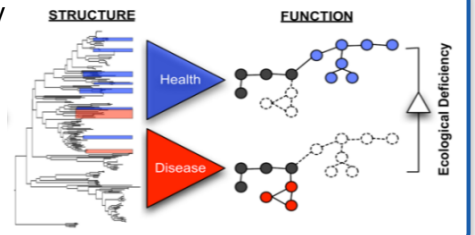
Appendix

SERES THERAPEUTICS™

Leading the Microbiome Revolution

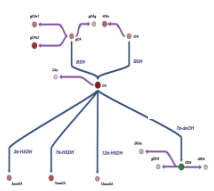
Differentiated microbiome R&D platform

Computational discovery using **human clinical datasets** to allow rational design of microbiome drugs in multiple therapeutic areas



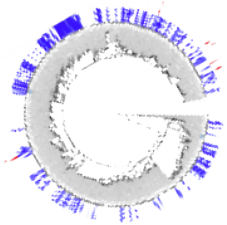
***In silico* derivation** of "backbone" functional microbial ecologies

Microbial networks

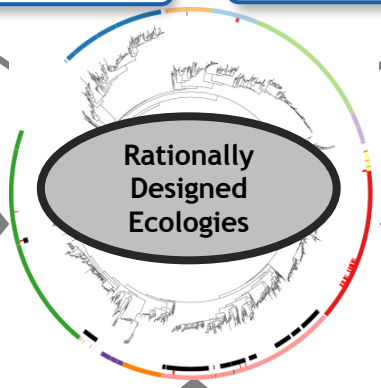


Functional pathways

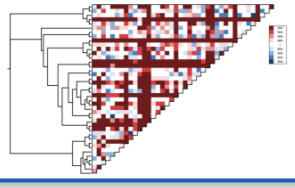
Vast microbial strain library and commensal bacteria culturing know-how



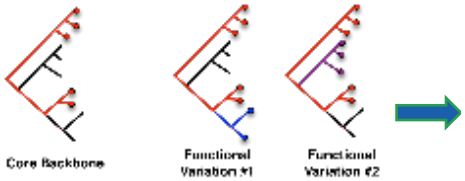
>35,000 isolates representing >450 species & broad phylogenetic breadth



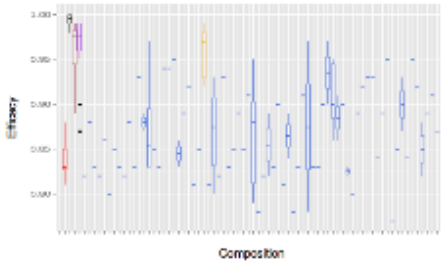
Genomic & phenotypic characterization of microbial strains & compositions using high resolution whole metagenomic shotgun sequencing, resolving down to strain level



Disease targeted metabolic, immunological, & efficacy screens for *"R-group"* informed lead optimization



Phylogenetically-informed "R-group" Optimization

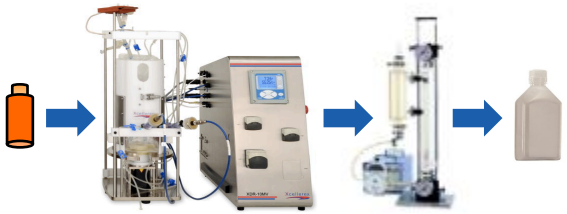


Only company with clinical stage development programs giving insights into how to therapeutically alter the microbiome to treat multiple diseases

CMC platform enables manufacture of cGMP-compliant, oral, microbiome therapeutic candidates

Synthetic candidates

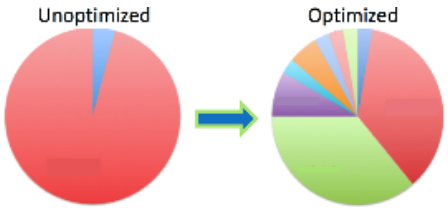
Fermentation of anaerobic and spore-forming microbes



cGMP Isolation of spores from complex biological materials

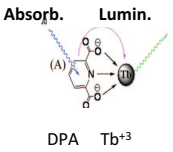
Biologically sourced

Novel germination, cultivation, and sporulation strategies enabling increased culture diversity and productivity



Formulation, filling, delivery & packaging enabling active product delivery

Novel QC assays for safety, identity, strength, purity, and quality including microbiome characterization

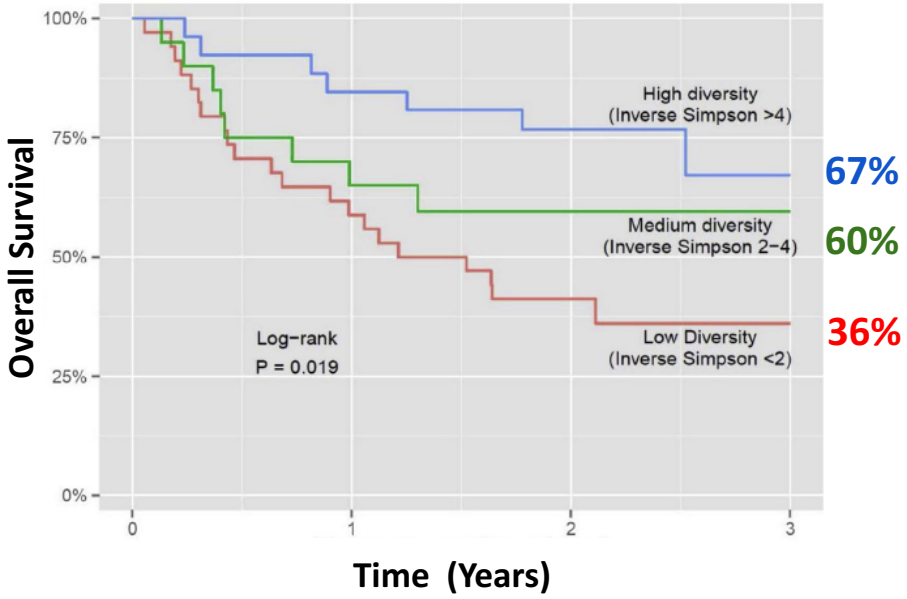


SERES THERAPEUTICS™

SER-155: Ecobiotic® therapeutic candidate to improve transplantation outcomes

- Ecobiotic® therapeutic candidate to improve outcomes in patients receiving allogeneic hematopoietic stem cell transplantation (HSCT) or solid organ transplants
- Designed to reduce both infection risk, and Graft vs. Host Disease (GvHD)

Patient Microbiome Diversity Correlates with Mortality Risk[3]



CARB-X
Xccelerating global antibacterial innovation

Nov. 2017: CARB-X grant of up to $5.6M obtained to support preclinical research and early development work for SER-155

[1] Khanna *et al*, Journal of Infectious Disease 2016 [2] Jenq, *et al*, Biology of Blood and Marrow Transplantation 2015, [3] Taur, *et al*., Blood 2015.

SERES THERAPEUTICS™